

PUBLISHER'S PAGE

"COMES the Revolution, you *will* eat caviar, and like it," the great comic Willy Howard used to tell his admiring audiences.

What he didn't say was that the revolution was actually upon us. Indeed, we are in it right now, up to our ankles, even though most people don't realize it. The brand of caviar we are "eating" is far more expensive than the real thing—and it would appear we like it—even though it has changed and will rapidly further transform our lives.

This fancy "caviar" in the present technological upheaval is television, the jet plane, atomics and automation, to mention only a few of the hundreds of brands of the electronic age. Yet we have only scratched the surface so far—maybe in 50 years we will be up to our middles in this revolutionary cycle.

Yet we all agree, the beginning thus far has been pleasant; far more so than the predictions of those dire prophets of doom, who see only chaos in every important new invention and discovery—technological unemployment, depressions and worse. These false soothsayers have not learned, and never will, that the impact of every great new innovation on our economy is in reality like a tremendous new capital enhancement, a Marshall Plan of its own. We should all be grateful that we live in this exciting age, where new wonders are created every day and where new revolutionary achievements make for sustained prosperity.

On with this modern type of revolution! Steeped and saturated with these revolutionary sentiments, may I, therefore, as I have for the past 46 years, shake your hand, *wherever you are*—oh yes, I really can do it now (see page 4)—and tender you my customary and cordial heartfelt wishes for 1955. In addition please let me wish you

**A Very Joyous Christmas
And a Happy and Prosperous New Year**

HUGO GERNSBACK

Despite it All, Your Editor and Publisher Since 1908,
25 West Broadway, New York

RADIO-ELECTRONICS MAGAZINE

GERNSBACK LIBRARY

SEXOLOGY MAGAZINE

SEXOLOGIA MAGAZINE (in Spanish)

Entire contents originated and written by Hugo Gernsback

Address all correspondence regarding this magazine to 25 West Broadway, New York 7, N. Y. Publishers may reprint contents of this magazine if usual credit is given. For art work, communicate with R. Fallath, Promotion Manager, RADIO-ELECTRONICS Magazine, 25 West Broadway, N. Y. C. 7, N. Y.

Art work by Frank Paul

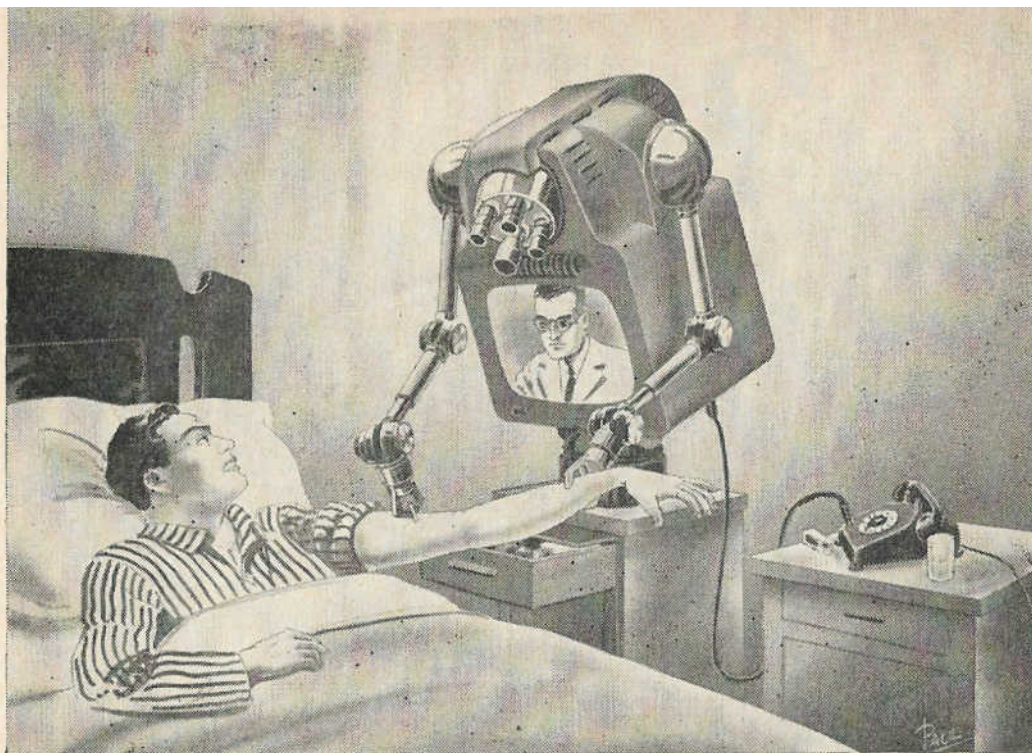
Copyright 1954 by Hugo Gernsback



Our Earth, according to the best scientific estimates, has been around for about $4\frac{1}{2}$ billion years. It has had its ups and downs, true, but it hasn't changed much. The changes have been insignificant, mostly surface variations. These are microscopic compared with the scant 8000-mile diameter of the planet. Compare our Earth to the giants of our planetary system—say, Jupiter, which is over 43,000 miles in diameter; still our own little abode is a fairly solid chunk of rock and dirt. Barring a most unlikely collision with another world, the Earth should last at least as long as the sun—more than 50 billion years, according to scientists. And nothing puny man can do, with his little gen bomb, packs less than one single flea power compared to a fair-sized hurricane or a normal tide beating against the short west coast of Ireland. Not 1000 H-bombs could affect much of the life on our planet. Even his most recent toy, the hydrogen bomb, tried suicide on a large scale, but 10 millions—or 100 millions—out of a total of $2\frac{1}{2}$ billion humans means little. Life would go on with little interruption. But would not we really civilized? Only barbarians would think of wiping out an appreciable percentage of humanity and their cities. All right, but what of the dangerous H-bomb tests being held continuously all over the world by the United States, Russia and Great Britain? Did not Winston Churchill raise the alarm recently? And was he not backed by some scientists in his estimate of this great danger? The answer to this and similar alarms is an emphatic NO! For billions of years the Earth's crust—in which we find uranium from which H-bombs are made—has given off atomic radiation continuously much more in its aggregate than all the bombs combined we will ever make. It hasn't poisoned our atmosphere with dangerous cumulative radiation? And is far more powerful than anything we have going on for billions of years. It is far more powerful than anything we have as yet produced, bombarding the whole of man's history? In the meantime it goes on all with a force greater than a hundred thousand H-bombs. Have we been radiation poisoned in the whole of such radiation to live? Hardly. We still know too little about it. Man should stop thinking he's playing God with his silly toys. As for his influencing Nature on a grand scale—what utter nonsense, dreamed up by that laughable minuscule mite—modern man! Can he conquer Nature without conquering himself?

NOTE: The Earth inclines $23\frac{1}{2}^\circ$ on its axis.

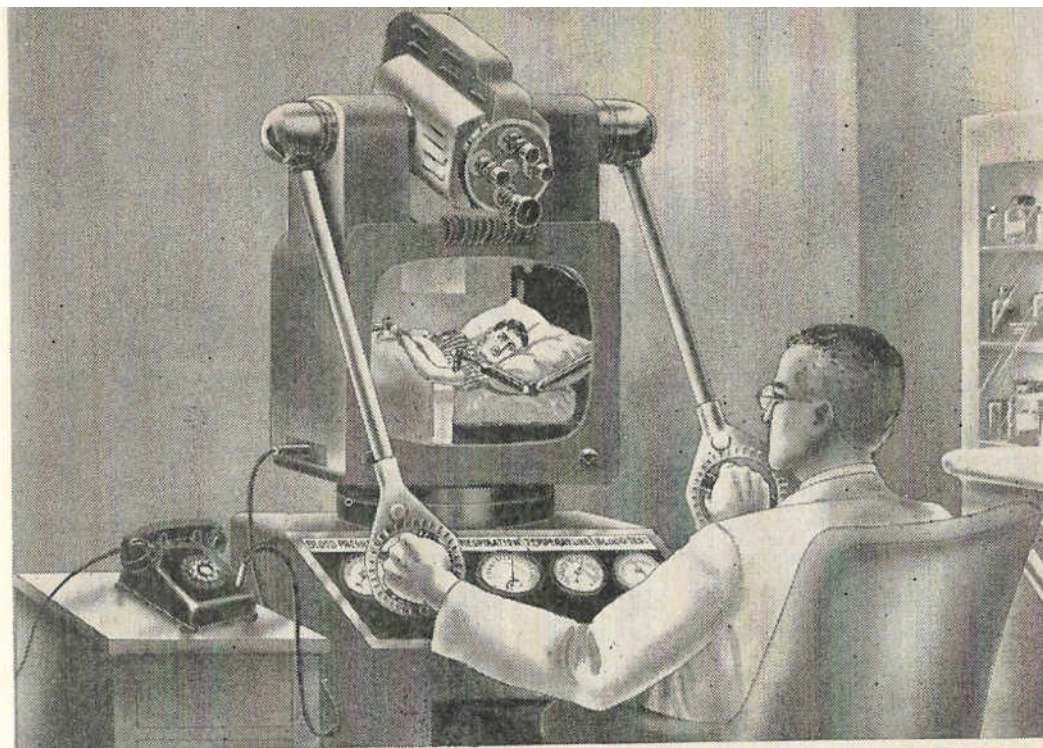
HUGO GERNSBACK



In the near future patients will be visited by doctors via television. The distant doctor can do almost everything with his electronic Telehands.

PROJECTION of the senses over a distance began early in the animal world. The cries uttered by alarmed prehistoric reptiles, saurians or birds were transmitted over a distance to warn others. A highly developed and sensitized olfactory sense brought the smell of an enemy creature to

the nostrils of early mammals who could then flee promptly, thus avoiding destruction. The sense of sight, too, became sharply developed in many animals and especially birds which could then observe potential enemies—or their own prey—often from a point many miles away.



Patient and distant doctor are connected by telephone and closed circuit TV. Doctor can treat ten times as many patients via teledocoring as in person.

Modern man, with new scientific techniques, has greatly improved the projection of some of his senses, not only over a few, but over hundreds and thousands of miles. By telephone, we can hear and speak to distant friends around the world. Via television, we can see across continents.

As I have pointed out in earlier articles, it will be possible in the future to smell and taste half-way around the globe—and further.* But science does not stop with this. There is the far more important conception of *the*

*See "Telebiovision," *Forecast* 1952, page 22.

the teledoctor

projection of the self at a distance. This means nothing less than the possibility now dawning for man to be in two places at the same time.

● I will give here but one example of this revolutionary concept, which, incidentally, is NOT in the future—it can be realized today, with the technical means available now.

The average medical doctor today is over-worked and short-lived. There are never enough doctors anywhere, for the world's constantly multiplying population. Many patients die because the doctor cannot reach them in time, particularly at night and in remote or isolated regions.

Furthermore, the doctor wastes a terrific amount of time visiting patients in person—he can see only a few during a day. With increasing traffic congestion, many doctors refuse to make personal calls—except in emergencies. Even then they arrive often too late. Much of this dilemma will be archaic in the near future, thanks to the *Teledoctor*.*

I imagine this innovation as follows: Incorporated as an integral part into a combination television camera and receiver is

a set of *mechanical hands*. The latter are now routinely manufactured by General Electric and other manufacturers. These incredibly sensitive hands are primarily used in atomic plants where scientists handle dangerous, "hot" atomic substances from a distance, without personally exposing themselves to danger. With these *telehands*, the scientist can do almost anything at a distance—writing, weighing, pouring liquids, unscrewing covers of "hot" containers—yes, even diapering a baby, miles away, including putting on the safety pins. *The sense of touch has been projected over a distance!* The action, of course, is watched via television.

● *The teledoctor of the near future now becomes an actual projection of the doctor.* In front of his television transmitter-receiver is a panel with a number of instruments which indicate blood pressure, pulse, respiration and other data routinely required in most examinations of patients.

Now let us see how you, the patient of tomorrow, "visit" your doctor, 15 miles away. Suppose you come down with a fever. You or your wife make a call to the local druggist, who is the agent for the teledoctor corporation which stocks the special TV

transmitter-receiver equipped with its telehands.

These instruments are never sold, only rented to the sick, say for \$3.50 a day. They are used only for closed-circuit work. The rubber-wheeled mechanism is delivered quickly to your home and rolled in front of the bed. Located in the drawer of the cabinet, right under the TV set, you will find a thermometer, blood-pressure appliance, sterile bandages, prescription blanks, fever chart (with instructions), tongue depressors, adhesive tapes and other items routinely found in every doctor's black bag. A cord with a telephone plug attached to the teledoctor instrument is now plugged into a special jack on your telephone. Future telephones will be provided with this facility. The TV signals and telehand electronic signals, etc., will all travel over the closed circuit telephone lines.*

● Next you dial your physician's telephone number. He or his nurse takes the call. You give your name and state that your teledoctor instrument is plugged

*Technical note. At the present state of the art, it is not possible to transmit a 525 line TV signal over existing telephone lines. A good picture of 250-350 lines, however, can be phone-transmitted today. Such a picture would give sufficient definition for the proper operation of the teledoctor.

in and ready. The doctor now plugs his own set into the telephone and in a few seconds two-way communication is established. The doctor by electronic telecontrol moves *your* instrument into the best position, raising or lowering your set, which has a swivel mechanism for that purpose.

The *color* camera is now trained on you and the doctor looks you over. He listens to your heart—not with a stethoscope, *but with the back of his right telehand*. This has a sensitive microphone which the doctor places over your heart. He hears your heartbeat, now strongly amplified, over his loudspeaker.

● He next takes your blood pressure, looks into your throat or examines any part of you. If he wants to inject you with penicillin or other medication, he will ask you to place a prescription blank into a holder arranged for this purpose. He picks up a special pencil from the drawer and writes out a prescription, then signs it. You are to get this from your drugstore as soon as feasible. When you have received it, you call the doctor once more. He places the special injection cartridge, *now on the market* called *Busher*, into his telehand

Continued on page 31

*See also article on the same subject: "The Radio Teledactyl" by H. Gernsback, SCIENCE & INVENTION magazine, Feb. 1925, page 978.

hurricane KILLER

ALMOST every fall, hurricanes kill scores of people and destroy property running into the hundreds of millions of dollars along the eastern Atlantic seaboard from the Caribbean to Canada, not to forget much greater damage in the lower lands in the corresponding Pacific area.

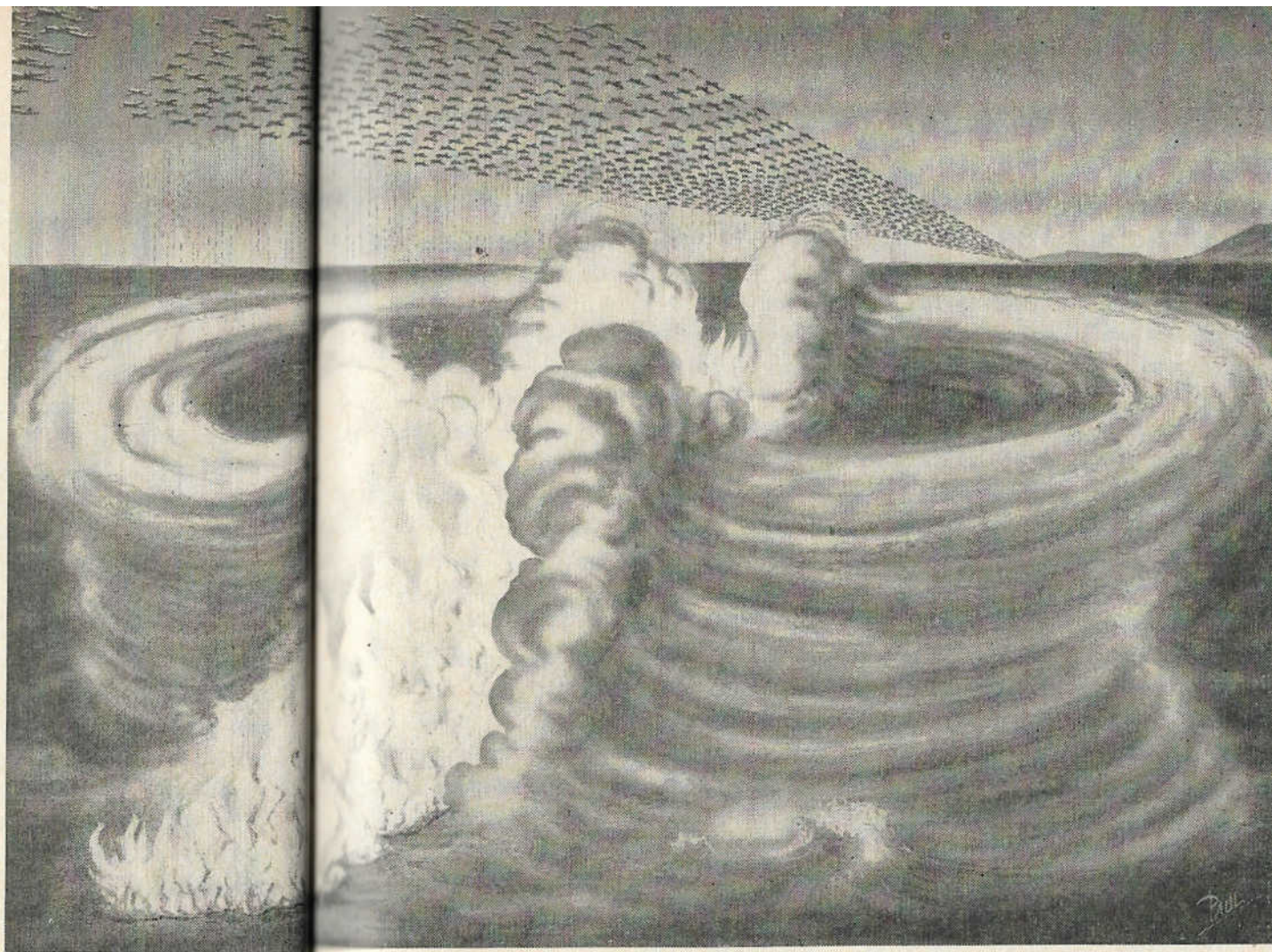
While many proposals have been made in the past to destroy or divert hurricanes, nothing has come of them. The chief reason is that once a hurricane is well on its way, it packs a fearful force, running into the trillions of horsepower during *every second* of its rampage. Furthermore, a full-blown hurricane covers an area from 300 to 500 miles in diameter and reaches up to 18,000 feet high around its eye.

As long ago as 1945, I proposed the use of special atomic bombs to divert storms. This may prove feasible in the future. Others have proposed spreading burning oil on the ocean in the path of the advancing storm. The latter idea would seem futile in case of a mature hurricane, for once such a huge whirling mass of air has gained sufficient momentum, nothing known on earth today can stop it.

The human mind really is unable to fully comprehend the unbelievable titanic forces generated by the average hurricane on a rampage. There seems no way to

describe it graphically.

During the past few years, however, we have learned a great deal about hurricanes. Nowadays they are tracked by air from the moment they are born—usually in the Caribbean region.



Slightly deviating hurricane may push it off course.

A dry, fierce hot fire curtain is created by dropping thousands of napalm-magnesium bombs from an airfleet near or on the embryo hurricane.

● IT IS THEN THAT WE MUST ATTACK. A day or two later, would be useless. To elucidate, let us keep in mind that man has in the past controlled nature to a degree with comparatively small energies.

This is done successfully at times through what physicists call "trigger effects." Let us note a few examples:

Spreading a few barrels of oil on a very heavy sea can calm the ocean over an appreciable area

near a ship. The dropping of a few ounces of silver iodide (or other chemicals) on a cloud can release thousands of tons of rain. If a large lake on a windless day becomes supercooled, i.e., a number of degrees below the freezing point, it often does not freeze. If then we throw a single stone into the supercooled water, the entire lake will freeze over solid in a few seconds, often to an appreciable depth.

● To deal with a hurricane, all we need to do is: 1—divert its course, 2—stop its rotary counter-clockwise motion, or 3—use both means. But to succeed WE MUST ACT SOON, AT THE STORM'S BIRTH.

All of this is feasible today. We have the technical means as well as the matériel to carry on a successful campaign against any hurricane. And the cost would be trifling compared to the astronomical sums we expend each year undoing the havoc caused by hurricanes, let alone the thousands of injured and killed people left in the wake of these destructive storms.

The *modus operandi* would be roughly as follows: We require 500 to 1,000 Navy or Air Force planes, depending on how fast the planes can get to the location of the embryo hurricane.

● Each plane carries a ton or more of a specially developed type of *Napalm-Magnesium* bomb. These incendiary gasoline-gel bombs were used during the Korean War with excellent results. For hurricane purposes, we require a far *hotter* type of bomb that will stay afloat on the surface of the ocean until it is entirely consumed. Such a bomb can be manufactured today without difficulty in large quantities at prices which are not prohibitive.

The heat generated by such super-temperature bombs runs into several thousand degrees and is effective over an appreciable radius. The fierce DRY heat also creates a powerful air updraft.

It should be noted that hurricanes *thrive on hot moist air* which carries the evaporated ocean water upward. But I believe that the hot *dry* air created by the napalm-magnesium bombs may actually divert the hurricane to great heights where it would dissipate itself.

The attack by the fleet of airplanes on the hurricane may take several forms. The air command may wish to try and divert the storm by pushing or maneuvering it into a new course, away from the land into the open sea. In that case, the planes will attack from a selected point of the

compass, laying down a barrage of bombs from that direction. The planes, flying in formation at a predetermined height, will drop *all* their bombs *simultaneously*. The bombs are fired automatically the instant they strike the surface of the water.

● Within seconds, a huge, solid curtain of fire rises to the sky, engulfing a fair amount of hurricane air and diverting it. A second wave of planes may now drop a further load of fire bombs *across* the hurricane, i.e., across both east and west walls of the rotating mass of air. A third wave may seed fire bombs north or south, if necessary.

This entire method may have to be repeated several times, if required, and no two storms will probably work out alike. After sufficient experience with a number of hurricanes, the final know-how will be evolved and carried

out routinely. It may even develop that the best means of attack lies through the "eye" of the hurricane.

Usually the center of these storms is a roughly circular zone of comparative quiet. Ships steaming through such an eye have thus reported them. It may be possible to break up a hurricane by dropping 500 or more fire bombs right in the eye somewhere near the rotating "walls" of air.

● In any case, I believe, the scheme is worth trying. The cost is not prohibitive and we have the means at hand for a full-scale trial. Our Government has in the past expended far greater sums in less attractive enterprises. And we may learn a lot once we attack a hurricane in earnest. The whole eastern American seaboard will applaud any reasonable effort in this direction.

The stakes are truly enormous—the cost comparatively minute.

TO OUR READERS

FORECAST 1955—like its many other predecessors—is the annual Christmas Card of publisher HUGO GERNSBACH. Over 6,000 copies have been printed for the publisher's friends in and out of the radio, electronic and television industry. Please do not send money for extra copies—the booklet is NOT for sale. Requests for single copies of FORECAST 1955 can be filled only as long as the present supply lasts. Quantity orders cannot be accommodated.

tec- TELEDUCATION

IT is no longer news that the Soviet Union is rapidly overtaking the United States in technical education. I have called attention to this very serious state of affairs in an article recently.* Many stories in the press continue to sound the alarm at an ever-increasing tempo, with an overtone of despair and frustration.† Reading these, it would appear that there is no remedy in sight, because of fundamental shortcomings in our educational setup for training technicians.

● We are told over and over that due to our traditional under-

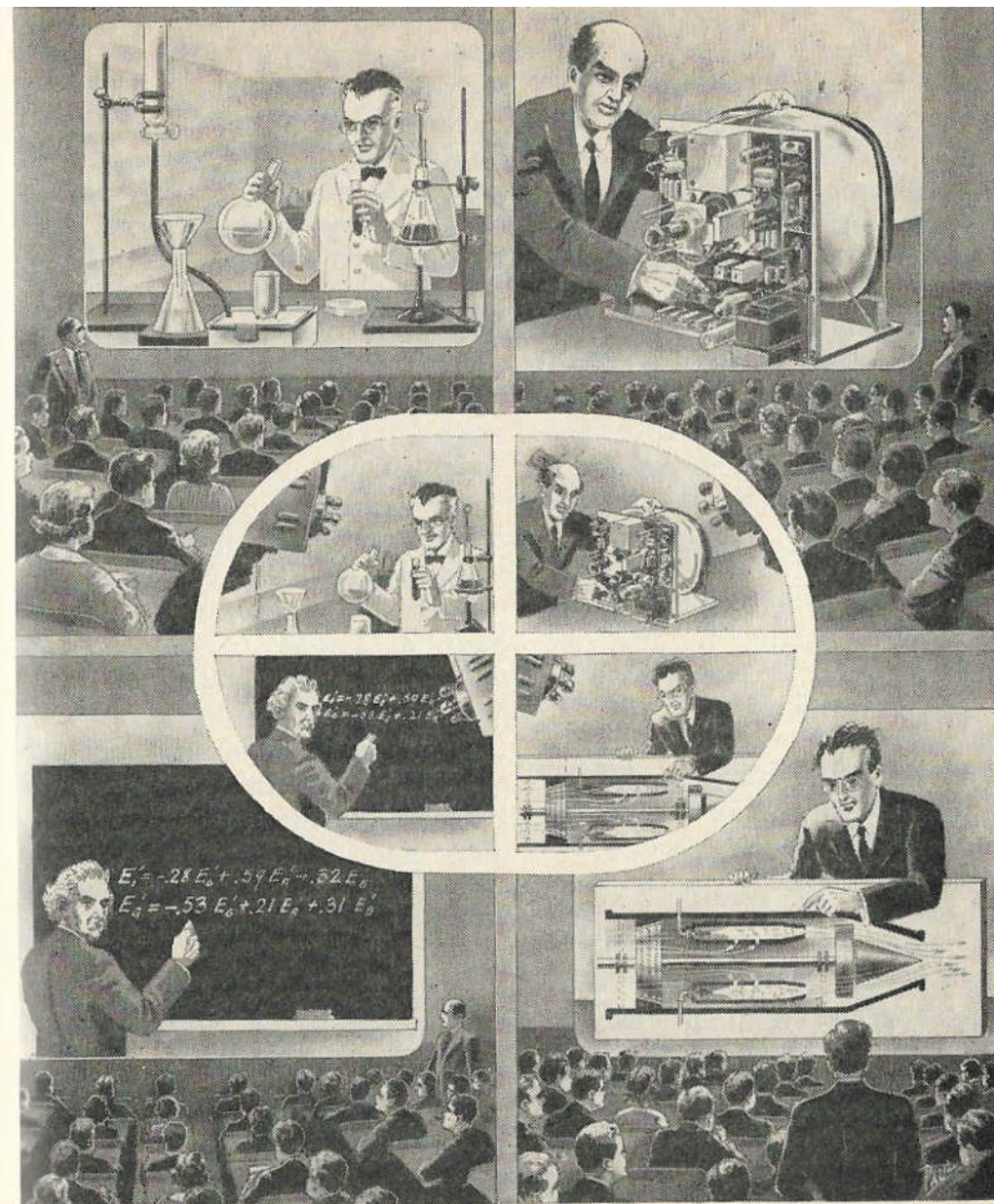
paying of teachers we cannot hope now to reverse quickly the trend of teacher-instructor defection. We cannot hold the thousands who abandon their poorly paid jobs to take more lucrative positions in industry or elsewhere.

New instructors—even if we finally see the light and pay them attractive salaries—cannot be recruited overnight. *It takes years to develop a good teacher or educator.* Not all the money in the world can undo the harm already perpetrated by our past *laissez-faire*.

The security of our country is based on technology and science. *These are, in fact, our national lifeblood.* Yet since 1950 the number of our technical graduates and scientists has decreased

*RADIO-ELECTRONICS, February, 1954, "Wanted: Technicians."

†NEW YORK TIMES, Nov. 7, 1954, "Russia Is Overtaking U. S. in Training of Technicians."



By 1955 Russia will have more technicians, which are our lifeblood, than U.S. We can only overtake the U.S.S.R. by quickly building a tec-educational, closed circuit TV network. At a central U.S. Teletorium the world's foremost technical teachers will instruct over half a million college students simultaneously all over the country. Giants of education will then teach hundreds of thousands instead of the hundreds of today.

constantly. Within a few short years—if we don't reverse the trend—we will be running far behind the Soviet Union.

● Today the United States, with 160 million inhabitants, has a scant 700,000 engineer-scientists. The Soviet Union, with a population of 213 millions, has almost 600,000. While our yearly number of technical graduates is rapidly decreasing, the Russians are *increasing* theirs as rapidly.

By 1955, THE SOVIETS WILL HAVE SURPASSED US BY FAR.

What the effect of this will be on our economy, our war potential and our very survival can be readily imagined. What is the answer?

Since 1950, I have been advocating *mass* education via television.* This was spearheaded by an editorial article I wrote for RADIO - ELECTRONICS, September 1951, entitled "Teleducation." The Board of Education of New York City evinced interest in the idea; but so far it has not been adopted, evidently due to lack of funds.

● The idea in its simplest terms can be described as follows: Instead of more—and often medi-

*See my Christmas booklet NEWS-PEEK, December, 1950. "Few Teachers Reach Many Via TV."

ocre—teachers and instructors, we need fewer but *outstanding* ones, men who are the very best in the land. *These educators will teach millions of pupil-students at the same time by television*, from one Central Teletorium which could be located say in New York, Chicago, Washington or anywhere else. Classrooms all over the country would be interconnected by a closed-circuit wire or microwave relay system to the Central Teletorium.

Because of the magnitude of such a national universal educational undertaking, it would of necessity have to be a Federally built one. The Government would not operate such a system, but finance it through the States.

While the fundamental idea of teleducation is simple in concept, I can visualize endless ramifications. For a better understanding of its scope, I will enumerate here only a few of its aspects.

● Emanating from a single Central Teletorium, a number of teaching programs can be broadcast over the closed circuits. Thus one set of teachers can teach grade schools. Another group will teach higher grades. A third can teach science for the lower grades. For high school purposes, there will be specially selected and more diversified science programs,

such as, the fundamentals of mechanics, chemistry, electricity-electronics, astronomy, etc.

The local schools all will have large projection type TV screens, so no pupil will have to strain his eyes to see the distant lecturer. Loudspeakers placed around the classroom will reproduce the voice of the teleteacher loudly and clearly.

Teleducation will not displace present teachers—it will supplement and augment them. Thus, the teleducation programs can be broadcast into the classrooms every other hour. The hours in between are left open for the local teachers for individual instruction, blackboard work, supervision during tests, etc. It will be seen from this that the system can be made as flexible as required.

Time difference between remote points of the country and the Central Teletorium is no problem. The programs can be repeated to remote towns via film or tape, as we do today in commercial TV.

Subversion by individual local teachers will become very difficult under the teleducation system, because the teacher no longer controls the classroom as happens sometimes at present.

● Most important, however, for the future of our country is the

aspect of technology in teleducation.

Just as we have a national closed-circuit TV network for grade and high schools, there will be a similar one for colleges and universities, covering the entire country. In principle, it will be similar. The faculties of the various colleges and universities will remain as they are, but they will be *augmented and amplified* by scientific and technological giants of the world from the Central Teletorium.

● No single university could possibly afford a constant stream of our country's and the world's greatest scientists, which can now be summoned either in person or by remote control and connected into the national *Tec-Teleducation* university hookup. How foolish we once were, our children will say in the future, to allow our great scientists to talk only to a few dozen or perhaps a few hundred pupils when the great man could lecture to 500,000 at the same time! And what student would wish to be absent when the latest Nobel-prize scientist or the Einstein of his day speaks?

Fortunately for America, we have in our hands today the technical means of making

Continued on page 31

universal

TV RECEIVER

THE technical world never stands still. As new know-how, new inventions, new facts and new techniques evolve, they are seized on immediately to improve present-day devices of every kind, whether pens, automobiles, floor mops, radios, corkscrews or television sets. Nothing is ever perfected; improvements, like evolution, never stop.

● This has been ever true in the radioelectronic industry, famous for rapid changes. No sooner has the latest model been announced, than its designers have already scrapped it in their minds and have moved on to next year's designs. This trend is even more common in television where the leading manufacturers bring out new and more modern designs throughout the year.

It follows that the television

receiver of the future will bear little resemblance to present-day models. This becomes even more apparent when we reflect that television has been with us only a comparatively short time—8 years:



TV set of the future has many functions. Has no aerial. Is three dimensional. Has picture tube. Hangs flat on wall. Sees and hears over your telephone, long dis-

tance. Transmits to other house sets. Pushbutton operated. Brings live Broadway shows by subscription. Turns off and on automatically. Is its own burglar watchdog.

It is still in its swaddling clothes.

For that reason, we should not be overly surprised at the radical and perhaps fundamental changes that lie ahead for the new art. And as television is intimately

fused with its parent, electronics—the latter itself of recent origin—*anything* is possible in the future. Here are a few ideas on television as your children will know them in times to come.

● The televiser of the future will certainly require no outdoor antenna, except in very special cases (fringe areas, etc.).

● Your receiver will be stereoscopic, i.e., the pictures will have depth—it *will be three-dimensional*.

● Your TV set will not have a huge picture tube and most probably it will not be a cathode-ray tube at all. Consequently, there will be no dimensional scanning which makes for today's long electronic scanning beams and long picture tubes. In the future television screen there will be millions of special spots, self-glowing in three colors when excited electronically in their proper linear sequence. They probably will be "steered" by atomic auto-transistors or like devices.

● The resulting picture will be so brilliant that it can be viewed in bright sunlight. *The size of your TV set will be only as large as its screen.* Thus a 21-inch set will measure about 23 by 16 inches, but *it will be only 2 or 3 inches thick.* The receiver can be placed on a table or hung on the wall like a picture.

Its glass, plastic or other special face plate will also be the loud speaker. This speaker will

be for the bass or low notes. The high notes will have a special speaker incorporated in the frame which surrounds the receiver.

● The TV set hanging on the wall, when not turned on, will appear as a beautiful painting, water color or drawing. This picture part disappears the instant the set is put in operation.* Thus, instead of a cumbersome appearing big receiver using a large floor area as do present sets, the future TV set becomes an esthetic picture on the wall. It will weigh less than 25 pounds, making it easy to service.

● All controls of the future TV set will be pushbutton-operated. Almost invisible, these buttons will be set in the lower part of the frame of the set. Each receiver will have a plug-in cord for remote control operation; and a small disc that fits the hand will have its own buttons for tuning, volume, off-on switch, etc.

● Other more elaborate models will be almost wholly automatic. They will turn themselves on and off at certain specified times, for certain selected programs only,

*First described by the author in RADIO-ELECTRONICS, January, 1954, page 33.

switching to other programs automatically. You will also be able to turn the set on or off from any part of the room merely by blowing a tiny supersonic whistle that humans cannot hear. The whistle is similar to the special dog whistles now on the market.

● Merely by pushing an extra button on the side of your receiver will change it from broadcast to closed circuit. *It also becomes a transmitter now.* Lenses for viewing and a microphone for listening will be built into the top of the television set frame. Similar TV sets located in various rooms in your home (or office) *automatically become intercommunicating.* Hence you can carry on conversations as well as see other persons in various rooms as desired. Note: Those desiring full privacy simply do not press the special closed-circuit button of their set. They are thus excluded from intercommunication.

● This does not end the versatility of the future TV set by any means. *It can be connected to your telephone* by throwing a special switch on the phone. You can now talk with and see people

across the continent and they (at least their faces) will appear life-size on your receiver.

● If you are a subscriber to the drama, the opera, the concert hall, your TV set will bring you the latest Broadway show *alive* or whatever entertainment you desire—for a price of course—over the switched-on closed circuit.

If you are afraid of burglars, you can become a member of a special safety service supervision company. They will monitor your home 24 hours a day via your TV set. They will watch your home whether you are in or out or on a trip. It would be difficult for burglars or intruders not to be seen. Cutting wires or darkening the supervised rooms will be disastrous for the robbers—it will instantly bring the police on the run.

● Lack of space precludes the listing of numerous other uses of the future Universal TV set. But one conclusion is certain—*the television set in the home can easily become the most important and valued, as well as the truly indispensable possession of the future household.*

AUTO-Analysis

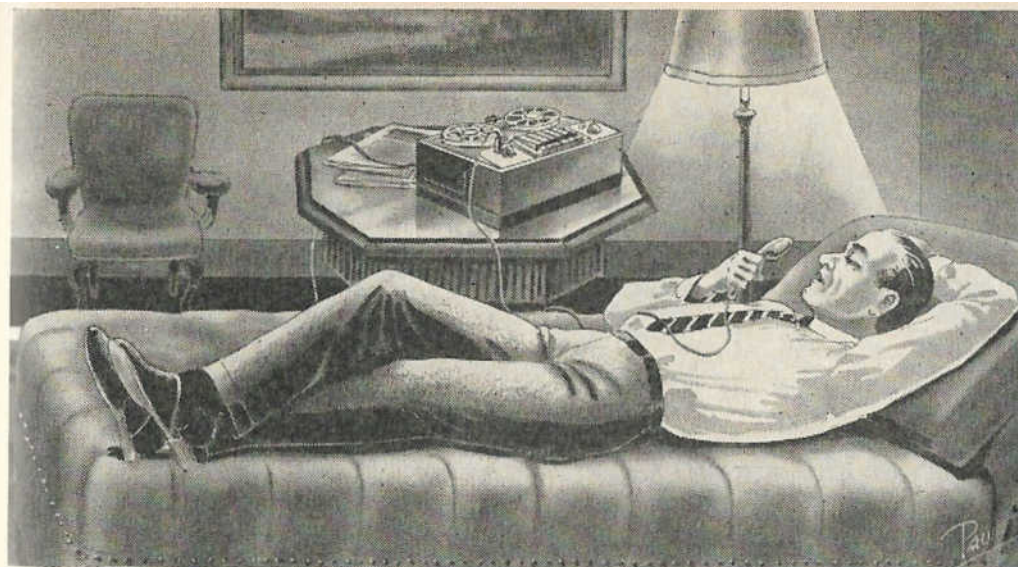
AS publisher and editor of **SEXOLOGY**—a largely medical magazine, now in its 22nd year—I have come into continuous contact with scores of psychiatrists and psychoanalysts in both the U.S. and abroad. I believe, for this reason, that I am qualified to make a number of observations and recommendations which may be helpful to many practicing members of the psychoanalytic fraternity.

Perhaps the greatest—and admitted—shortcoming of the profession is the large percentage of non-medical members, those who have no medical (M.D.) degree. A qualified Freudian (and associated schools) psychoanalyst must undertake special training for two or three years in addition to the regular 6 year medical education. For that reason, also, the fees charged by a graduate psychoanalyst are usually higher than those of the average medical doctor.

● Unfortunately, too many non-medical psychoanalysts are quite unable to be of much benefit to their patients, simply because

they do not have the proper training. Many do more harm than good. Others—and their number is legion—are amateurs, often quacks. Let us also record that there is a fearful shortage of good psychiatrists and psychoanalysts in the U.S. today. This accounts for the fantastic overcrowding of our mental institutions.

The dictionary defines psychoanalysis as that branch of psychotherapy that prescribes treatment in the light of experiences elicited from the patient. In practice, this means that the patient, while reclining on a couch, rambles on and on, while the analyst sits aside, listens and takes notes. The patient, by unburdening himself of his most secret and innermost thoughts—particularly those of his early childhood—can often untrigger the roadblock which causes much of his trouble or illness. One important difficulty is the frequently strong reluctance of the patient to reveal *very intimate details* in the presence of the analyst. This is particularly true of women. Once the mental channel is cleared, the



The psychoanalyst's couch is passé! For better results let the patient stay home and talk into a taperecorder, mailing recorded tape to his doctor.

patient often is on the road to recovery. While this may be an oversimplification, it will help the average reader whom we do not wish to burden with extended technicalities.

● *In any event, it is a fact that psychoanalysis is based chiefly upon the mental catharsis of the patient, and frequently the mental block rests squarely upon some youthful sexual experience.*

For over two decades, we of **SEXOLOGY** have seen this routinely in a never-ending stream of letters—*some as long as 92 pages*. Such letters serve as enormous cathartic expressions for the writers, who often profess themselves relieved after one or two answering letters from our medical doc-

tor in charge of that department.

The analyst's work is long and tedious—each patient comes for consultations of 1/2 to one hour, usually several times a week, often for two or more years. The cost to the patient is high—not many cases can be seen per day—8 to 12—a pitifully small number.

● The remedy: *Do away with the couch in the analyst's office. It is an anachronism. Let the patient use his bed or sofa in his own home. He now can talk in the privacy of his home into the microphone of a tape recorder which he rents, for as long as needed. The recorded tape is taken or mailed to the analyst, once or*

Continued on page 31

NIGHTMARE STOPPER

NIGHTMARES may be said to be harmless to the healthy, even if discomfiting, and often frightening.

But to the ill, particularly those with defective hearts, these bad dreams are not only dangerous, but even fatal. This can be readily understood by those who have experienced a severe nightmare and who have been awakened by its alarming after-effects: a wildly beating heart, strained to near bursting, and a body soaked in perspiration.

● Medical science so far has not come up with a workable solution. Drugs, for instance, are not the answer. Heart patients cannot be drugged night after night, and there are few harmless drugs that will suppress dreams, particularly nightmares.

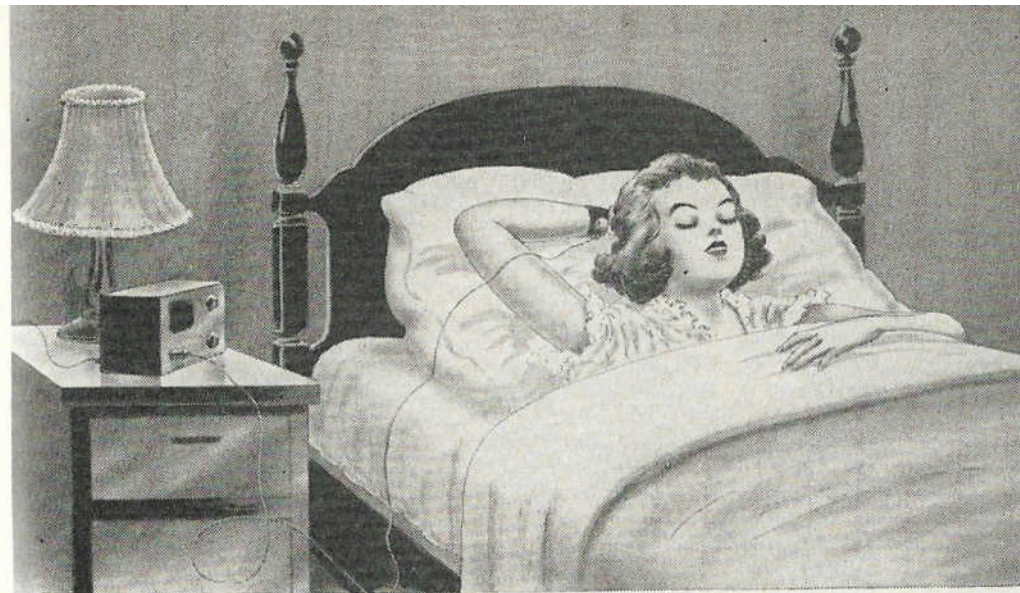
The electronic device which I describe here is an effective nightmare killer, because it operates

fast at the beginning of the disturbance, i.e., when the pulse rate increases.

In electronics, we have a number of different means to accomplish the same results—among others, varying the capacitance of a condenser or *directly* affecting the grid of a vacuum tube.

I will describe only a single one, the latter. A metal band-clasp with hinges is attached to the wrist. Inside the metal band there is a special miniature vacuum tube. It is known as an electro-mechanical transducer tube.

● The grid part of the tube goes right over the inside of the wrist near the pulse artery. This tube is enormously sensitive to pulse variations. During normal pulse, the electronic circuit is not affected; it "idles." An increasing pulse rate, however, immediately influences a second elec-



By using a special electronic tube placed in wrist band, a quickening pulse at the start of a nightmare operates a device that wakes you up.

tronic tube which now energizes an amplifier. This in turn closes a relay. The latter then operates a small induction coil connected with two contact points under the metal wristband. The mild tingling series of shocks felt by the wearer awakens him.

In a few seconds his pulse rate subsides and the shocks stop. Once used to the instrument, the subject—if he is a sound sleeper—may not even wake up. He probably will turn over on his side and sleep on. (Most individuals who have nightmares sleep on their backs.)

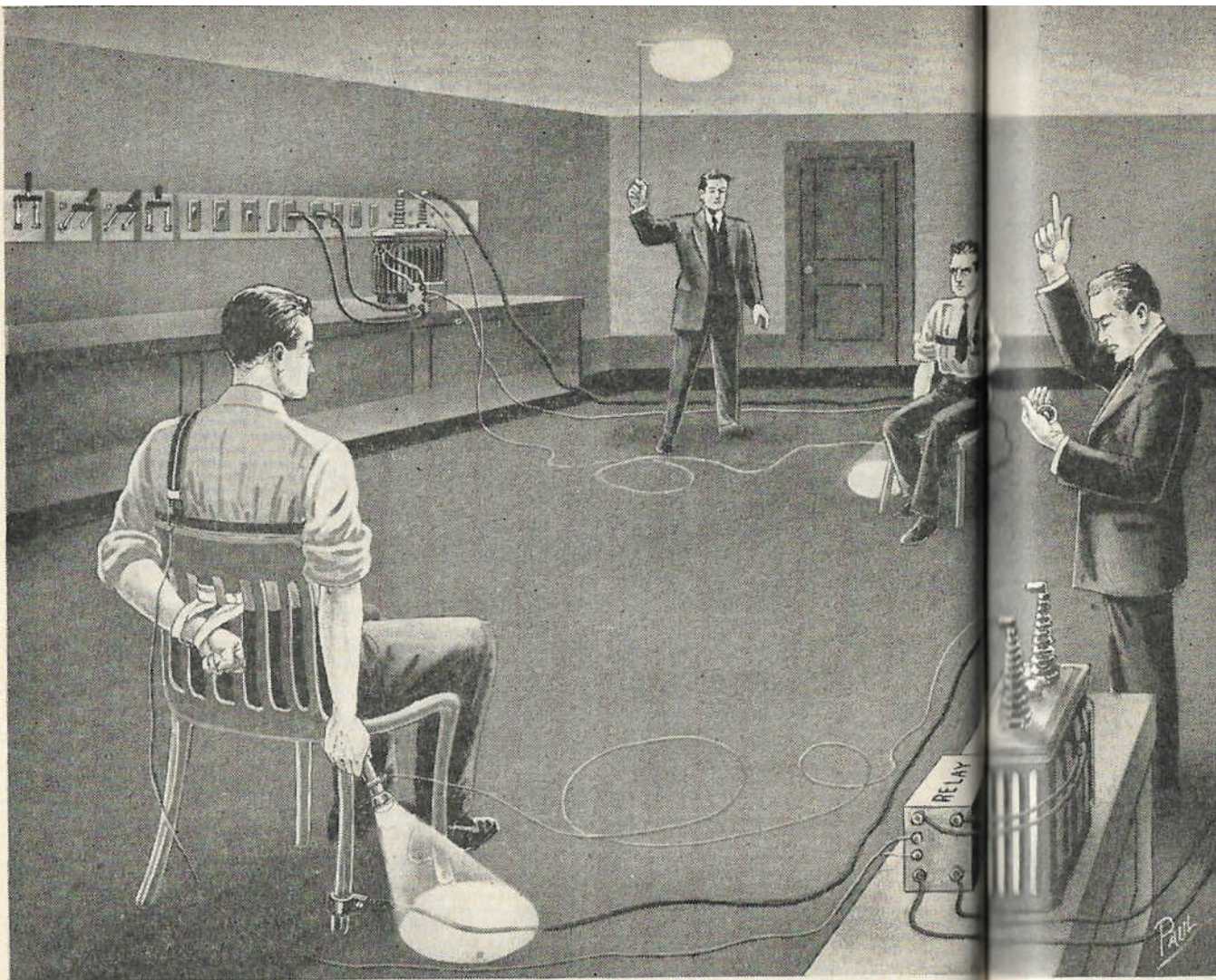
The wearer of the electronic wrist band is not discomforted by it or the thin connecting cord

which must be long enough not to upset the box containing the main elements.

The circuit usually chosen allows for plugging the outfit into the house 117-Volt a.c. supply.

● Patients need not fear an accidental connection to or harm from the house current. The wrist tube and the induction coil which supplies the harmless shocks are *battery operated*. Only the amplifier is connected to the house a.c. supply.

While a patent is pending on this device, you may build a nightmare stopper for your own use—so long as it is not made or sold commercially.



A deadly duel is fought by electronics, the weapons: two flashlights. No skill of arms is required in this amazing encounter and more surprising ending.

WHEN the two boyhood friends, Frank Wallace and Jed Carrel, graduated from college as electronic engineers, they landed lucrative positions with Electronda Laboratories. Being brilliant young men, they

advanced rapidly. The head of the Laboratories predicted great achievements for both of them.

The future looked electrifying indeed until that fateful day when the high-tension, sexually explosive Gigi Garnier, the boss's

THE ELECTRONIC DUEL

niece, started a chain reaction by taking a minor position in the Laboratories' accounting department.

● It came as a surprise to no one that Gigi's scintillating black eyes, her high-Gauss personal magnetism, her low-decibelle audio voice, her sine-wave curvacious chassis, and her wondrously fine, 50 AWG gauge, glistening black hair completely short-circuited all Frank's and Jed's willpower. Their capacitance for further resistance was totally punctured as well.

History abounds with many au-

thenticated cases of lightning striking simultaneously in two places, wreaking havoc in the process.

Frank and Jed, within two days of Gigi's flamboyant entrance into the Laboratories, quite naturally had fallen in high-potential love with her. They began dating her continuously, if not furiously. The love-making, too, was in the upper regions of volatilizing fission.

In a few short weeks, the two male lovers had almost completely exhausted their passion-voltage, which approached zero level. Their love capacitance, too, had sunk to a low current ebb—down in the milliamperes reaches.

Frank was so exhausted that he caught a severe case of full-wave virulent virus that put him *hors de combat*. Jed, however, played it smart. He laid low for two days, not out of fairness to a sick friend, but to boost his

The timekeeper counts the seconds.

own strength, knowing well that Frank was incapacitated for several weeks. Then he redoubled his onslaught on the electrifying Gigi in earnest. He amplified all his signals and there was no doubt left in her mind that his hi-fi love output was "true dimensional." He soon began to sense her conversion when his ardent kisses generated a firmer reciprocal contact with a high-level feedback that was eminently satisfactory.

● He could resistor no longer. "Will you marry me—now, tonight?" he panted. She scanned her two gorgeous 'scopes only for seconds, her eyelids oscillating lazily, as she exhaled a weak "Yes," nestling in his arms.

Within hours, a willing justice of the peace had engineered a permanent hookup for the lovers, who next morning, with their employer's blessings, departed for a three-week honeymoon.

Not willing to face Frank, who was slowly regenerating, they sent him a wedding announcement en route, after they were certain he was well enough to leave his bed. Frank, however, had already heard the news by underground transmission, and no one can blame him if he blew a fuse and his insulation broke down badly. Indeed, he suffered a self-induced relapse—

when the surging currents of despair kept building up dangerous peaks which only slowly discharged to a normal level.

● Frank took the perfidiousness of Jed and Gigi badly. He felt that they had taken unfair advantage of him while he was ill. He was certain that in a balanced contest he would have come out the winner—at least he would have had a chance. But now he felt cheated and he swore vengeance.

As the days wore on—while the "cheaters" were enjoying their ill-gained honeymoon—a diabolical plan began to crystallize in Frank's feverish brain. The more he thought about it, the better he liked it.

He would challenge Jed to an electronic duel, which he could not refuse.

Accordingly, he began to rig up an assortment of deadly electronic equipment in his own quarters at the Electronda Laboratories. His spacious office lent itself well to this. No one paid attention when research engineers assembled special electronic equipment from time to time. In a few days, everything was in readiness and he could now afford to await calmly the return of the enemy.

On a Monday morning, Jed

returned to his office. Frank congratulated him with biting sarcasm and sly innuendos, and ended it all with an oblique reference to Gigi's questionable past. Indeed, he vouchsafed that he, Frank, was extremely pleased to have palmed off the shopworn Gigi on Jed so successfully!

● Jed, in a hot bunsen-burner rage, struck several vicious blows at Frank, who thereupon insisted that the two should have it out that very night. Frank then also suggested casually that if Jed thought his honor was at stake they could best set matters right by fighting a duel—an electronic duel. In the heat of the moment, the outraged Jed agreed to this and it was decided that they would meet at the Laboratories at 8 that night. Two mutual friends, sworn to secrecy, were to witness the affair. It was furthermore stipulated that Gigi would not be informed of the duel.

As both men had keys to the Laboratories, they, as well as the two witnesses, Philip Roche and Franz Frantzen, assembled in Frank's office promptly at 8 P.M.

Philip and Franz—as is routine in all standard duels—in vain tried to persuade the two former friends to abandon their mad project, only to be met with

stern rebuffs. Because, as Jed put it succinctly, "There is not sufficient room on this planet for both of us—one must die!"

The dueling arrangement, Frank explained, was eminently fair to both men. They would fight for their lives with extremely simple weapons—*two ordinary flashlights*. Both men would sit on metal chairs, twenty feet apart, but facing each other. Strapped over their hearts, each man would have a light-sensitive photoelectric cell, such as commonly used in electronic laboratories. *Each* photo cell and a relay was connected to a separate and powerful 50,000-volt high-tension transformer.

● The scenario went as follows: If subject 1 trained his flashlight full on subject 2's photo cell, *even for an instant*, relay No. 2 would close its circuit. Transformer No. 2 would now discharge its lethal current through subject 2, by way of the metallic flashlight *he* was holding. Separate return circuits were wired to each chair, the seat of which was wetted, assuring a perfect contact for the electrocution. It would be a noiseless and painless death.

Frank and Jed personally tested the circuits. Then one of the seconds flipped a coin, de-

ciding which duelist should occupy chair 1 and who should sit in No. 2.

The men then seated themselves, pale but composed. It had been agreed that both Frank and Jed were to dangle their right arms over the backs of their chairs in the now darkened room, the flashlights turned on, but pointing to the floor.

One of the witnesses was to tick off 25 seconds, counting the time back from 25 to zero. At zero, both duelists were to point their flashlights at each other as quickly as possible, each trying to be *first* in training the light rays on his adversary's photo cell for a certain death.

The left hands of the rivals were taped to the backs of their chairs so neither contestant could possibly cheat by placing his left hand *over* the photo cell which would then not function because the flashlight's rays could not operate the light-sensitive cell.

All final preparations made, the duelists sat grimly facing each other in the dark, both flashlights lit, illuminating the floor with two ghostly circles. The quiet was ponderous and nerve-wracking in its intensity, as Franz's methodic and clear voice droned the fleeting seconds . . . 18 . . . 17 . . . 16 . . . 15 . . .

* * *

● Here I find it necessary—and I apologize for the interruption—to point up a most disagreeable problem.

You see, I have become beset by grave doubts about this most interesting account, and, quite frankly, I don't know just how to proceed. I have carefully weighed some very dramatic finishes, but the more I ponder them, the less sure I become. Let us therefore inspect the proposed endings, one by one:

● No. 1. *The Popular Ending.* Obviously, Frank is a dirty cad. He besmirched willfully and knowingly the fair damsel Gigi's reputation. The reader knows well that this was a dastardly trumped-up calumny of a bad loser. So, let's electrocute Frank, and our true and vindicated lovers will live happily ever after.

That's what you think! What about Gigi? Will she just swallow all this gaff and never reproach Jed for having killed her former lover in cold electronics? After all, he knew how to make love, too! Won't she, in a sacred moment of passion, hiss at Jed, with a "Go away, you murderer! Don't touch me with your yellow electronicotined hands!"

● No. 2. *The Doubtful Ending.* All right. Let's kill Jed, her hus-

band. So Frank, the rat, survives triumphantly, if cynically. Naturally he hotfoots it to the widowed Gigi and tries to console her, pleading that the whole thing was an unfortunate accident. In time, this vile snake in Gigi's perfumed garden will of course marry her. Brrrr—what a mismatch! No, this won't work.

● No. 3. *The Clever Ending.* Remember 'way back we planted that lightning gag, striking in two spots *simultaneously*? Well, why not? We kill the two heroes simultaneously! Fortunately, with electronics—a form of lightning—this is child's play, easy as pie.

As any electrical engineer will tell you, it works. So now we have both boys good and dead. But that emphatically does *not* end it. We still have Gigi on our hands, and I can't see how we can kill her, too—or can we?

Is she heartbroken and prostrated? Gad, no! Not Gigi. For she glibly tells reporters that she was sick and tired of these persistent electronic hot-finger boys anyway. She really married Jed only in desperation, knowing full well that she had been spliced to a supercharged hot wire. No more of such nonsense. She's packing and flying down to her own New Orleans—pronounced *Nu Or-léon*—from where she escaped

to get away from Jean Pierre Coquemar, her boyhood friend, now *sous-chef* at Antoine's Restaurant. "At least," says Gigi with aplomb, "he *can* cook—and how!"

● No. 4. *The Surprise Ending.* When Jed leaves Gigi on that fateful evening of the duel, after kissing her goodbye and pleading an important business meeting, something in his manner disturbs her. She is perturbed by his unusual tenderness and the long-lingering hot-incandescent-cathode kisses.

After he is gone, her feminine short-wave intuition signals an electronic danger warning. She calls up her uncle-boss, but he knows of no business meeting. Then she calls up Frank—but there is no answer. Thoroughly alarmed, she takes a bus to the Laboratories. But there are few busses in the late evening and she loses much valuable time. Finally she arrives at her destination and tries the main entrance—fortunately it isn't locked. She runs from one office to another and finally locates Frank's. She bursts in just at zero second and in the dim light shining through the door, she sees both Frank and Jed slumping in their chairs—*both dead*. (See Ending No. 3).

With a curdling ten-decibel shriek, she throws herself on Jed, grasps the hand that still clutches the 50,000-volt charged flash-light, kisses Jed full on the lips with a low heartbreaking moan—the kiss of death for her. The two witnesses, Franz and Philip, who had no time to turn off the lethal current that energized the death-dealing transformers, lose their heads when they see the three corpses and flee in panic.

Patently, such an ending, where the three principals of the story are cooked—though electronically—at the end, is hardly appropriate. The public would not stand for it. No movie mogul would deign to buy the film rights for such a gruesome tale.

● No. 5. *The Corny Ending*. Somebody dreams the duel and wakes up screaming. These dream finishes are the hackneyed finale of many misguided authors. They are too silly for words, the dreams, that is.

POTPURÉE

Congressional Inquiry

*He who takes what isn't his'n
Must return it or risk a quizzin'.*

Meterdollargy

● Riches are not a measure of ability but often a yardstick of greed.

Beastly Thought

● Hope springs eternal in the human beast.

Definotion

● Electronics—man's controlled essence of lightning which he directs at will, near and far, to do his bidding.

I could go on to tell you at least four more interesting endings, but, unfortunately, none pan out right. Yes, there is even one where Gigi had a black-sheep-of-the-family twin sister named Giga, who could be dug up and palmed off on that lowviper Frank. But these skeleton-in-the-closet relics—even if they are as gorgeous as Giga—are odious and down-right corny. And who in these spaceless days has a closet big enough to store a skeleton? They don't build them *that* big anymore!

So you see what I'm up against. I started out blithely with a sure-fire elegant idea. But what happened? It imploded like a punctured TV picture tube—a complete internal collapse. I know when I'm licked—I give up. I really should stick to my forecasting. . . .

NOTICE: "The Electronic Duel" will be published in *Esquire Magazine* in the May 1955 issue. This story cannot be reproduced without permission from the copyright holders.

THE TELEDOCTOR

Continued from page 7

and presses it against your skin. By spring action, the medication is shot into the arm quickly.

The doctor then gives you whatever other instructions are required and promises to "visit" you again early in the evening. When you are well again, phone your druggist who will call for the tele-doctor instrument.

● *It should be noted that, short of a serious operation, the doctor of the future will be able to do almost anything by teledocoring that he can do in person.* He can remove your bandages after an operation, bandage you, remove stitches post-operationally, swab wounds, all at a distance.

In the more distant future, he will even be able to perform emergency long-distance operations, provided a nurse or nurses can be secured to assist him.

Soon, your doctor will be able to see far more patients with infinitely greater efficiency. He will not only save untold lives, and generate better health for his patients, but his own life will be made far easier and he will himself live longer and so serve suffering humanity far better than was ever possible before.

NOTICE: Reproduction rights to this article have been acquired by *The American Weekly*, and may not be reprinted.

1955

TEC-TELEDUCATION

Continued from page 15

teleducation a reality in the immediate future. We need not wait for a new development to make it possible—all the necessary elements are here now. All we have to do is bring the new system into being. We do not have to be outclassed and outdistanced by any other country in the world.

AUTO-ANALYSIS

Continued from page 21

twice a week. The analyst, or his staff, answers by mail after the tape has been listened to and processed. Thus the analyst, instead of treating eight or ten patients a day, can treat over a hundred at much less cost to the patient.

If the analyst wishes and has the space, he can install ten or more soundproof airconditioned booths, for patients desiring analysis in the doctor-analyst's office.

● In small centers which now have none or only few analysts, the nearest hospital could well become a county psychoanalytic center, treating thousands by mail where only a few can be seen today. All this requires intelligent organization. It can be done for the benefit of people who need psychiatric help, but who either cannot afford the average fee or have no access to qualified psychiatrists in their communities.

31

FORECAST

Nous Charlotte
par la grâce de Dieu
Grande-Duchesse de Luxembourg
(Duchesse de Nassau)
etc. etc. etc.

*Sur le rapport de Notre Ministre des Affaires Etrangères
et après délibération du Gouvernement en conseil;*

Avons trouvé bon et entendu de nommer

OFFICIER

de l'Ordre Grand-Ducal de la Couronne de Chêne

Monsieur Hugo GERNSBACK

Savant et homme de lettres

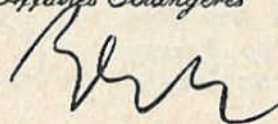
NEW YORK

Donné au Palais de Luxembourg, le 16 décembre 1953.

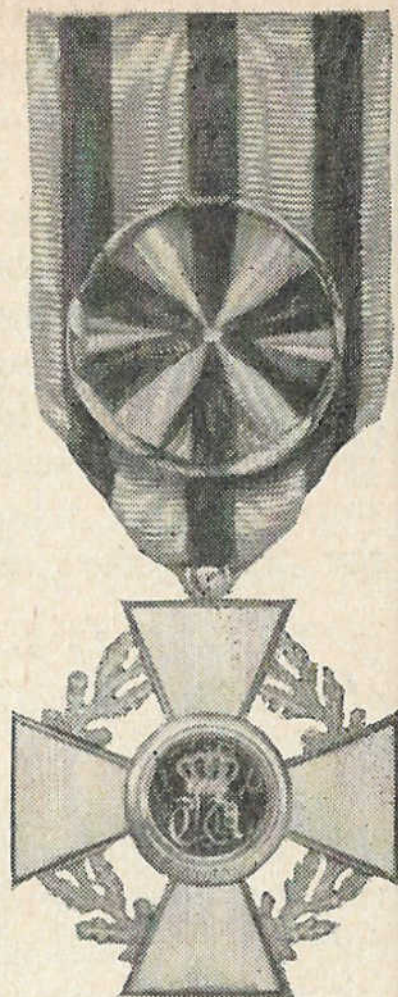
Charlotte

Pour ampliation

*Le Ministre
des Affaires Etrangères*



*Le Ministre
des Affaires Etrangères
signé Joseph BECH*



Hugo Gernsback, editor and publisher of RADIO-ELECTRONICS, was decorated last year by Her Royal Highness, Grand Duchess Charlotte of Luxembourg. The presentation was made in New York City, by B. N. Zimmer, Honorary Consul General of Luxembourg.

(TRANSLATION)

WE, CHARLOTTE, BY THE GRACE OF GOD, GRAND DUCHESS OF LUXEMBOURG, DUCHESS OF NASSAU, ETC.

On the report of our Minister of Foreign Affairs and after due deliberation of the government in session; have found it proper and arranged to name as

OFFICER
OF THE GRAND DUCAL ORDER
OF THE OAKEN CROWN
MR. HUGO GERNSBACK
SAVANT AND MAN OF
LETTERS
OF NEW YORK

Given at the Palace of
Luxembourg, December 16, 1953
(signed) CHARLOTTE

The Minister of Foreign Affairs
(signed) Joseph Bech